

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (currently amended). Reaction vessel for producing a crystal from a substance in liquid form or in solution, comprising at least one housing part having several walled reaction chambers, each forming a separate gas chamber, and each walled reaction chamber having inside thereof a reservoir and several reaction areas co-operating therewith, the reaction areas being connected to one another and to the reservoir in order to exchange gas, ~~the reservoirs and the~~ walled reaction ~~areas co-operating therewith~~ chambers being disposed immediately adjacent each other in straight rows, the straight rows being disposed immediately adjacent to one another in immediately adjacent, parallel rows and distributed in an identical manner, each row of reservoirs co-operating with a row of reaction areas, and the immediately adjacent ~~reservoirs and the~~ walled reaction ~~areas cooperating therewith~~ chambers in the immediately adjacent, parallel rows and in each row being separated demarcated from one another by a common walls, whereby the number of reaction chambers in the reaction vessel is maximized.

2 (original). Reaction vessel as claimed in claim 1, characterised in that the reaction chambers are identical in structure.

3 (original). Reaction vessel as claimed in claim 1, characterised in that the undersides of vessel floors of the reaction chambers come into contact with a plane parallel with the standing plane.

4 (canceled).

5 (canceled).

6 (previously presented). Reaction vessel as claimed in claim 1, characterised in that respective adjacent reservoirs of two consecutive rows are offset from one another by a same distance and in a same direction relative to the direction of the rows.

7 (currently amended). Reaction vessel as claimed in claim 1, characterised in that the ~~reservoirs are arranged in~~ reaction chambers have a rectangular ~~pattern~~ cross section.

8 (original). Reaction vessel as claimed in claim 1, characterised in that at least one more or less plate-shaped housing bottom part is used as a housing part, comprising

housing bottom parts co-operating with the reaction chambers and a frame extending laterally from an edge of a top face of the housing bottom part down in the direction to the undersides of the vessel base.

9 (previously presented). Reaction vessel as claimed in claim 8, characterised in that the vessel bottom parts comprise at least one reservoir and several reaction areas.

10 (previously presented). Reaction vessel as claimed in claim 8, characterised in that at least three reaction areas are provided in the vessel bottom parts.

11 (canceled).

12 (previously presented). Reaction vessel as claimed in claim 8, characterised in that the reaction areas of the vessel bottom parts are disposed at a height in the region of 5 mm to 10 mm above the vessel base of the reservoir.

13 (previously presented). Reaction vessel as claimed in claim 8, characterised in that the reaction areas of the vessel bottom parts are provided in the form of recesses with a capacity in the region of less than 5 μ l.

14 (previously presented). Reaction vessel as claimed in claim 13, characterised in that the recesses are provided in the form of a plate-shaped cuboid designs or in a cylindrically-shaped disc.

15 (previously presented). Reaction vessel as claimed in claim 13, characterised in that floors of the recesses are of an approximately convex curvature relative to the floors.

16 (previously presented). Reaction vessel as claimed in claim 8, characterised in that, seen in a plan view down onto the standing plane, the rows of reaction areas of the housing bottom part lie respectively adjacent to the rows of reservoirs.

17 (original). Reaction vessel as claimed in claim 1, characterised in that the cross section of the reservoir in a plane parallel with the standing plane is rectangular.

18 (currently amended). Reaction vessel as claimed in claim ~~1~~ 8, characterised in that the frame of the housing bottom part and the layout of the reaction chambers are designed to conform to a the standard size of a micro-titre plate.

19 (previously presented). Reaction vessel as claimed in

claim 1, characterised in that a number of reaction chambers is provided in the housing bottom part, the number being selected from a group based on a mathematical formula of 3×2^N where N is a natural number.

20 (previously presented). Reaction vessel as claimed in claim 8, characterised in that the housing bottom part is made from a transparent plastics material.

21 (original). Reaction vessel as claimed in claim 1, characterised in that a housing part comprises an at least approximately lid-type vessel cover with grooves on an underside and vessel top parts containing at least one reaction area are bounded by the grooves.

22 (currently amended). Reaction vessel as claimed in claim \pm 21, characterised in that, on an edge of the underside of the vessel cover, a frame is provided projecting beyond the underside.

23 (currently amended). Reaction vessel as claimed in claim \pm 21, characterised in that the vessel top parts are designed to have several reaction areas.

24 (currently amended). Reaction vessel as claimed in claim ~~±~~ 21, characterised in that the vessel top parts are designed to have two reaction areas.

25 (canceled).

26 (canceled).

27 (currently amended). Reaction vessel as claimed in claim ~~26~~ 36, characterised in that the ~~recesses of the vessel top parts are~~ recess is of a cylindrical disc shape or in the form of a plate-like, quadratic cuboid.

28 (currently amended). Reaction vessel as claimed in claim ~~26~~ 36, characterised in that the ~~recesses of the vessel top parts are~~ recess is designed to have a capacity in the region of less than 5 μ l.

29 (currently amended). Reaction vessel as claimed in claim ~~±~~ 36, characterised in that ~~floors~~ a floor of the ~~recesses~~ recess forming the at least one reaction ~~areas~~ area in the vessel top ~~parts are~~ part is of an at least approximately convex curvature with reference to ~~these recesses~~ this recess.

30 (currently amended). Reaction vessel as claimed in

claim ± 21, characterised in that, seen in a plan view onto the standing plane, the rows of reaction areas of vessel cover lie respectively adjacent to the optionally provided rows of reaction areas of the housing bottom part.

31 (currently amended). Reaction vessel as claimed in claim ± 21, characterised in that the frame of the vessel cover and the layout of the vessel top parts are designed to conform to a standard size of a micro-titre plate.

32 (previously presented). Reaction vessel as claimed in claim 1, characterised in that a number of vessel top parts is provided in the vessel cover, the number being selected from a group based on the mathematical formula of 3×2^N where N is a natural number.

33 (currently amended). Reaction vessel as claimed in claim ± 21, characterised in that the vessel cover is made from a transparent plastics material.

34 (currently amended). Reaction vessel as claimed in claim ± 21, characterised in that a mask is applied to the face of the vessel cover remote from the reaction areas and, seen in a plan view down onto the standing plane, this masks surrounds the reaction areas with a light-screening surface.

35 (currently amended). Reaction vessel as claimed in

~~claim 1, wherein for producing a crystal from a substance in solution or in liquid form, comprising at least one housing part having several reaction chambers, each forming a separate gas chamber, and each reaction chamber housing a reservoir and several reaction areas co-operating therewith, the reaction areas being connected to one another and to the reservoir in order to exchange gas, the walled reaction chambers being are in the form of prisms with a regular hexagonal base surface and being are disposed in a honeycomb arrangement, adjacent ones of the reaction chambers being separated by a common wall whereby the number of reaction chambers in the reaction vessel is maximized.~~

36 (currently amended). Reaction vessel comprising a vessel bottom part with a vessel floor and vessel walls forming several walled reaction chambers, each reaction chamber having inside thereof a reservoir for liquid agents and at least one reaction area separated from the reservoir and having a gas connection thereto, adjacent ones of the walled reaction chambers being ~~separated~~ demarcated from one another by a common vessel wall, whereby the number of reaction chambers in the reaction vessel is maximized; a vessel top part, which lies against the vessel walls, optionally with a sealing layer in between, covering the walled reaction chambers; and at least another reaction area formed by a recess above the reservoir in

the vessel top part.

37 (canceled).

38 (original). Reaction chamber as claimed in claim 36, characterised in that the reaction areas are of a vessel-type design and every two are separated from one another by a common wall.

39-42 (canceled).

53 (new). Reaction vessel as claimed in claim 1, characterised in that the reaction chambers have a base surface area in the form of a parallelogram.

54 (new) Reaction vessel according to claim 1, characterised in that the reaction areas and the reservoirs extend in rows parallel to the rows of the walled reaction chambers, and each row of reaction areas is adjacent to a row of reservoirs in the immediately adjacent row of walled reaction chambers.